

slip 28/01

Dart Aerospace Ltd.

Date: Tuesday, 20/01/2009 2:39:57 PM  
User: Linda Lacelle

# Process Sheet

~~REFERENCE ONLY~~

Customer : CU-DAR001 Dart Helicopters Services  
Job Number : 44965  
Estimate Number : 13735  
P.O. Number :  
This Issue : 20/01/2009 S.O. No. :  
Print Rev. : NC  
First Issue : 1/1 Type : SMALL /MED FAB  
Previous Run :  
Written By : W  
Checked & Approved By :  
Comment : Est Rev:A 09-01-19 as per prelim issue DD verified by:EC

Drawing Name : TAILBOOM MOUNT KIT  
Part Number : D412786015  
Drawing Number : D412-786-1 PRELIM  
Project Number : N/A  
Drawing Revision : PRELIM  
Material :  
Due Date : 27/01/2009 Qty: 4 Um: Each

*100.04.22*  
*POSITIVE RECALL*  
*3 split*

Additional Product

PRELIMINARY ISSUE

Job Number:



Seq. #:

Machine Or Operation:

Description:

1.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Photocopy bluefile & type labels per PPP D412-786-015 CHG001

*N/A*

2.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

3.0

D3866041

Mount



Comment: Qty.: 1.0000 Each(s)/Unit Total: 4.0000 Each(s)

Mount

batch:

*44950 x2*

*B344950 9/4/21 SC*

*SS*

*09/01/28*

4.0

D3866043

Tailboom Mount



Comment: Qty.: 2.0000 Each(s)/Unit Total: 8.0000 Each(s)

Tailboom Mount

batch:

*B344953 x2*

*B344953 9/4/21 SP*

*SS*

*09/01/28*

5.0

MS21042L3

Nut



Comment: Qty.: 12.0000 Each(s)/Unit Total: 48.0000 Each(s)

Nut

batch:

*M108816*

*9/01/27 (4)*

~~REFERENCE ONLY~~

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Linda Lacelle

# Process Sheet

Drawing Name: TAILBOOM MOUNT KIT

Customer: CU-DAR001 Dart Helicopters Services

Part Number: D412786015

Job Number: 44965

Job Number:



Seq. #:

Machine Or Operation:

Description:

6.1

MS27039111

Screw



Comment: Qty.: 12.0000 Each(s)/Unit Total: 48.0000 Each(s)

Screw

batch: M9662

7.0

NAS1149D0332J

Washer



Comment: Qty.: 24.0000 Each(s)/Unit Total: 96.0000 Each(s)

Washer

batch: M110625 (40X)

M110233 (56X)

INSPECT 100% KITS FOR COMPLETENESS

1.0

QC4



Comment: INSPECT 100% KITS FOR COMPLETENESS

PACKAGING RESOURCE #1

9.0

PACKAGING 1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D412-786-015

Location:

PPP Rev:

44949

9/4/22

SL

10.0

QC21



Comment: FINAL INSPECTION/W/O RELEASE

FINAL INSPECTION/W/O RELEASE

09/04/22

Job Completion

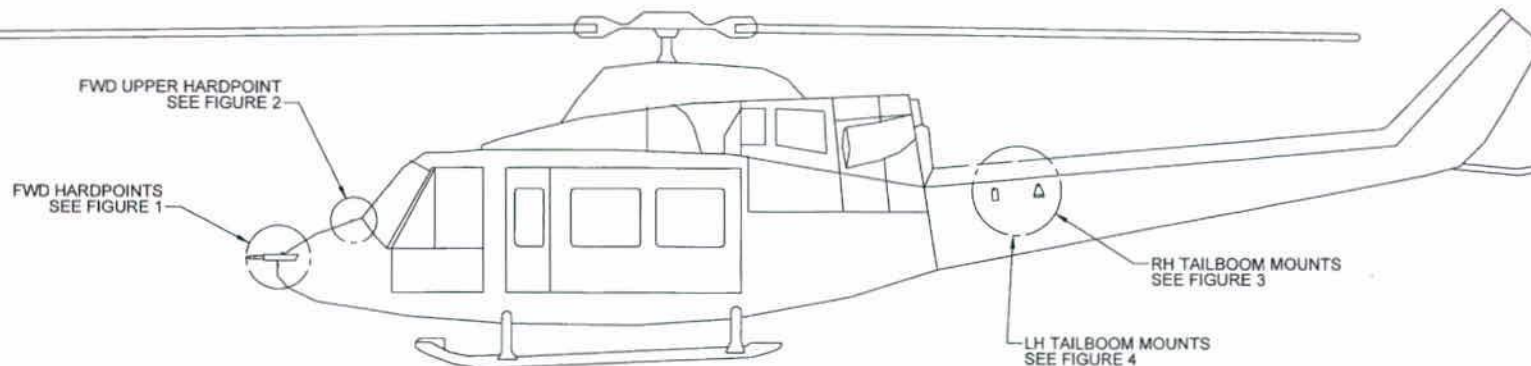


POSITIVE RECALL  
EFFECTIVE 09-20  
RELEASED

AUTH h  
DATE 09-04-21

mf 09-04-22





#### D412-786-011 HARDPOINT KIT

QTY -011	QTY -013	QTY -015	PART NUMBER	DESCRIPTION
X			D412-786-011	HARDPOINT KIT
1	X		D412-786-013	FWD HARDPOINT KIT
1		X	D412-786-015	TAILBOOM MOUNT KIT
		1	D3866-041	TAILBOOM MOUNT
		2	D3866-043	TAILBOOM MOUNT
	1		D3870-041	FWD LH HARDPOINT
	1		D3870-042	FWD RH HARDPOINT
	1		D3870-5	FWD UPPER HARDPOINT
	1		D3871-1	DOUBLER
	1		D3871-2	DOUBLER
	10	12	MS21042L3	NUT
	8	12	MS27039-1-11	SCREW
	1		MS27039-1-12	SCREW
	1		MS27039-1-14	SCREW
	10	24	NAS1149D0332J	WASHER

INSTALLATION	WEIGHT	LONGITUDINAL		LATERAL	
		ARM	MOMENT	ARM	MOMENT
D412-786-011 HARDPOINT KIT	0.58 LBS 0.22 KG	164.67 IN 4.18 M	95.51 IN 0.92 KG-M	-1.25 IN -0.03 M	-0.73 IN-LB -0.007 KG-M
D412-786-013 FWD HARDPOINT KIT	0.22 LBS 0.08 KG	-13.55 IN -0.34 M	-2.98 IN-LB 0.03 KG-M	2.36 IN 0.06 M	0.52 IN-LB 0.005 KG-M
D412-786-015 TAILBOOM MOUNT KIT	0.36 LBS 0.13 KG	273.58 IN 6.95 M	98.49 IN-LB 0.90 KG-M	-3.47 IN -0.09 M	-1.25 IN-LB -0.01 KG-M

RELEASED  
07/07/19 MP

44965

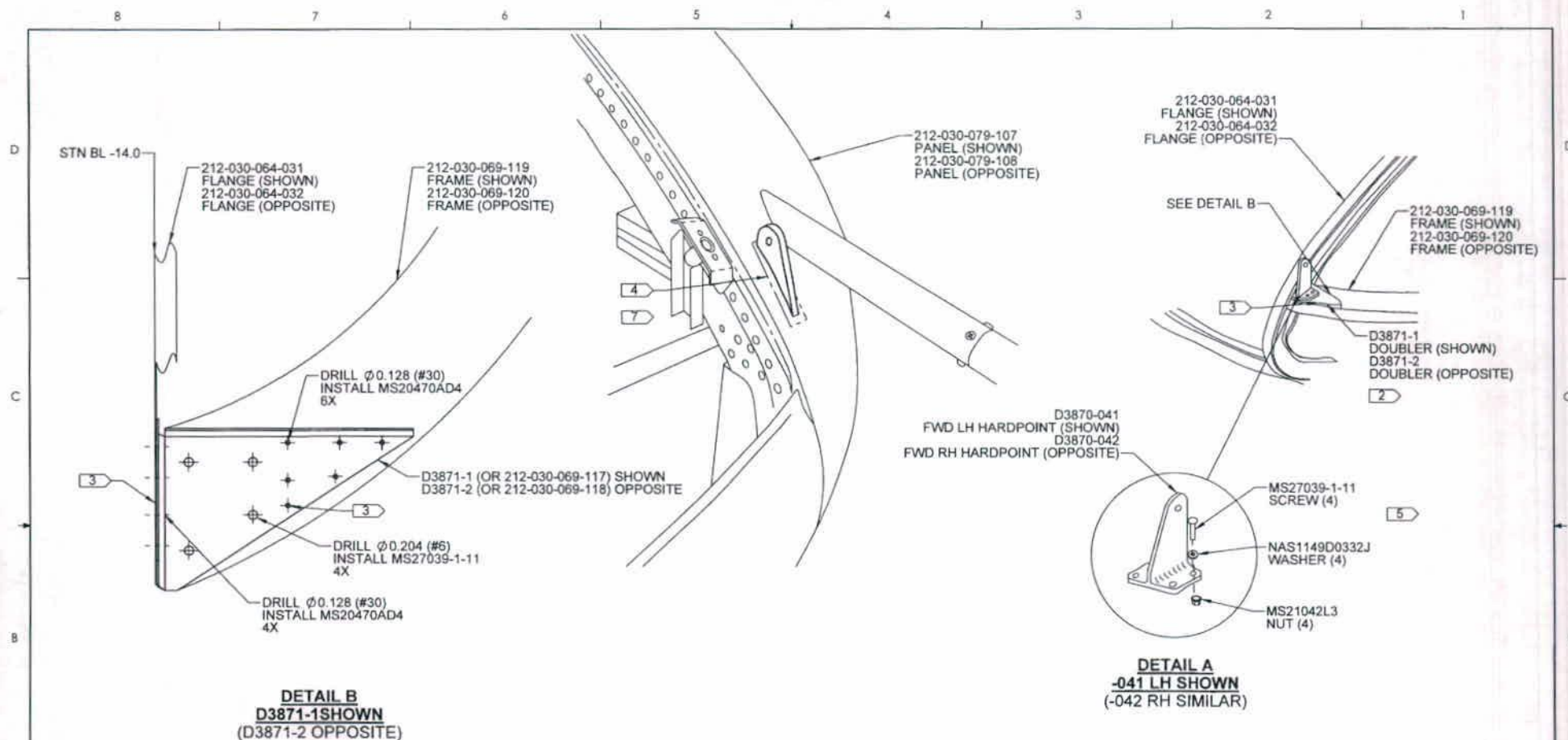
#### NOTES:

- 1) D412-786-011 HARDPOINT KIT REQUIRED ON 412/412EP AIRCRAFT UTILIZING D412-695-011 BLADE FOLDING KIT WHERE WIRE STRIKE COMPATABILITY IS REQUIRED
- 2) TOUCH UP DRILLED HOLES WITH ALODINE PER THE AIRCRAFT MAINTENANCE MANUAL
- 3) TORQUE FASTENERS AS FOLLOWS: 10-32; 20-25 IN-LBS
- 4) PRIME AND PAINT HARDPOINTS TO MATCH AIRCRAFT PAINT SCHEME PER AIRCRAFT MAINTENANCE MANUAL

A	NEW ISSUE	BY	09.01.14
REV	DESCRIPTION	DATE	
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.	N/A		
APPROVED			
DE APPR.			
DATE	09.01.14		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D412-786-1	REV. A
TITLE HARDPOINT KIT INSTALL	SCALE NTS
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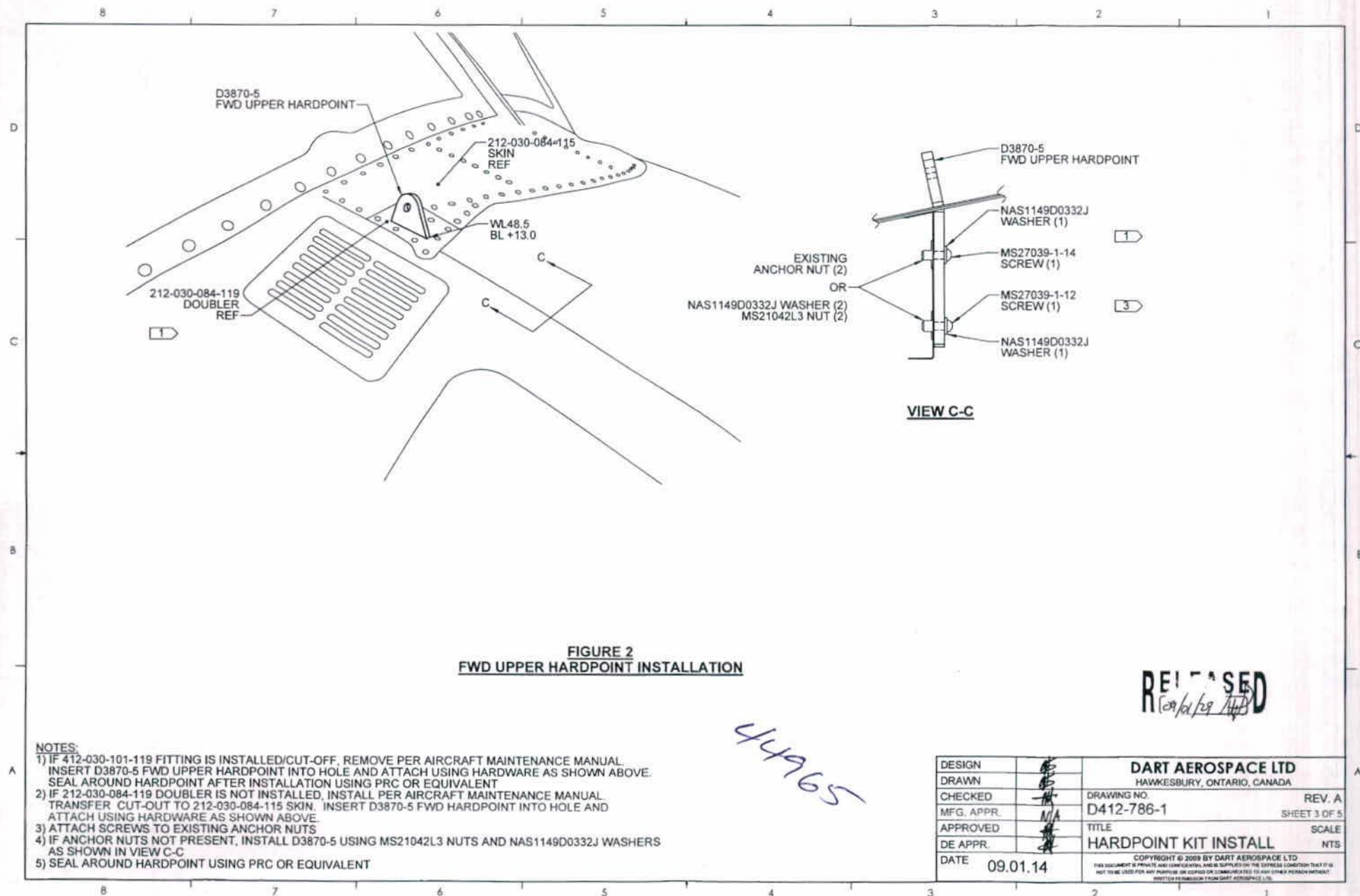
**FIGURE 1**  
**FWD HARDPOINT INSTALLATION**

**NOTES:**

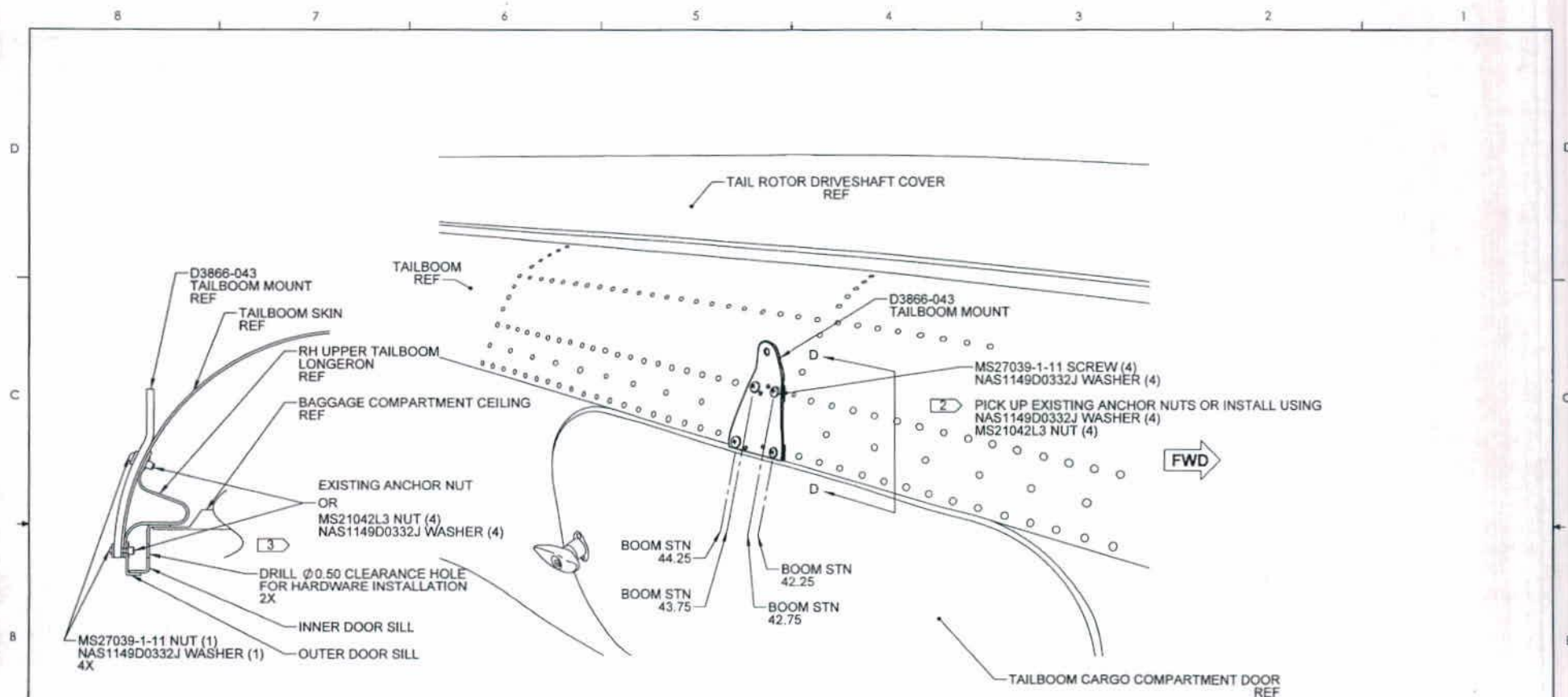
- 1) IF 412-030-205-101/-102 FITTINGS HAVE BEEN INSTALLED/CUT-OFF, REMOVE AND REPAIR 212-030-079-107/-108 PANELS PER AIRCRAFT MAINTENANCE MANUAL
- 2) D3871-1/-2 DOUBLERS NOT REQUIRED IF 212-030-069-117 AND -118 DOUBLERS ALREADY INSTALLED, SEE STEP 4
- 3) IF 212-030-069-117/-118 DOUBLER(S) NOT INSTALLED, POSITION D3871-1/-2 DOUBLERS AS SHOWN IN DETAIL B AGAINST 212-030-064-031/-032 FLANGE. TRANSFER DRILL 6X  $\phi 0.128$  (#30) HOLES FROM D3871-1/-2 DOUBLER INTO 212-030-069-119/-120 FRAME. TRANSFER DRILL 4X  $\phi 0.204$  (#6) FROM D3871-1/-2 DOUBLERS TO 212-030-069-119/-120 FRAME. TRANSFER DRILL 4X  $\phi 0.128$  (#30) FROM 212-030-064-031/-032 FLANGE INTO D3871-1/-2 DOUBLER. DEBURR AND INSTALL D3871-1/-2 DOUBLERS USING MS20470AD4 RIVETS
- 4) CUT SLOTTED HOLE IN 212-030-079-107/-108 PANEL FOR D3870-041/-042 MOUNT.
- 5) INSTALL D3870-041/-042 LH/RH HARDPOINTS USING MS27039-1-11 SCREWS AS SHOWN IN DETAIL 'A'
- 6) TO PROVIDE ACCESS TO HARDWARE, IT IS ACCEPTABLE TO INSTALL WITH NUT ON TOP OF D3870-041/-042 MOUNT IF REQUIRED
- 7) SEAL AROUND ENTIRE PROTRUSION WITH PRC OR EQUIVALENT (ALL EDGES)

**RELEASED**  
21/01/2013

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VIEW D-D

FIGURE 3  
LH TAILBOOM MOUNT INSTALLATION

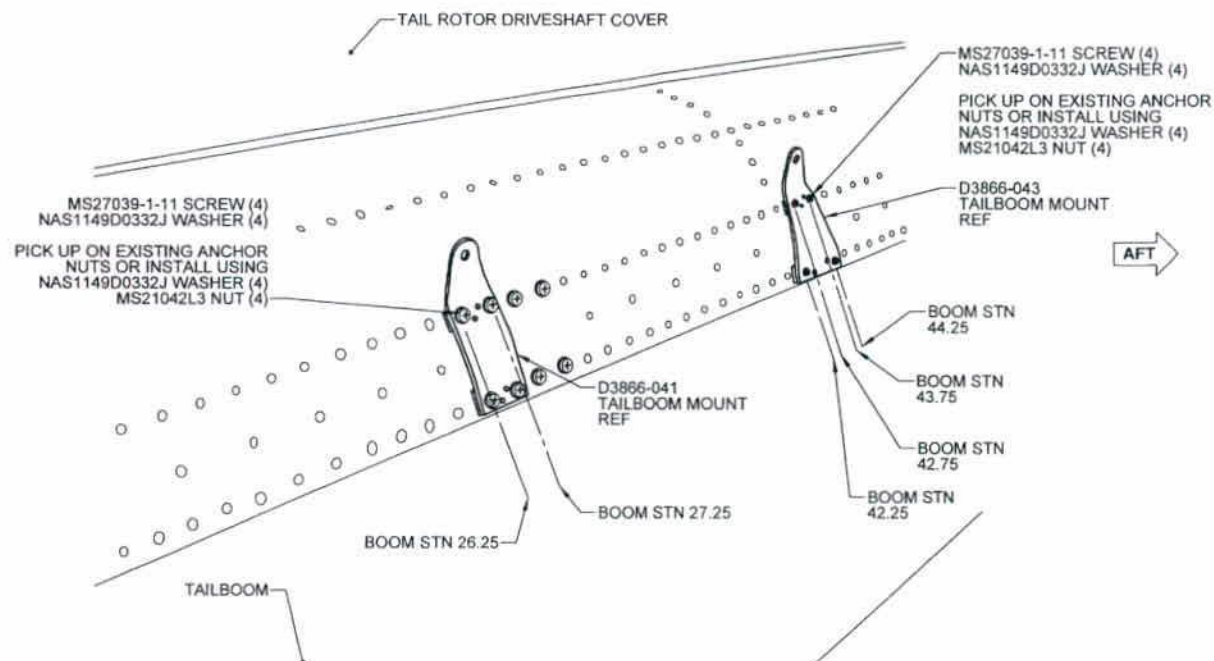
RELEASED  
29/01/29

NOTES:

- 1) IF ATTACHMENT SCREWS ALREADY INSTALLED IN TAILBOOM, REMOVE SCREWS AND VERIFY CORRECT LENGTH PER DRAWING ABOVE. TRANSFER DRILL 4x Ø0.204 (#6) FROM TAILBOOM TO D3866-043 MOUNT. DEBURR. INSTALL D3866-043 TAILBOOM MOUNT USING MS27039-1-11 INTO EXISTING ANCHOR NUTS.
- 2) IF ATTACHMENT SCREWS NOT INSTALLED, DRILL OFF RIVETS ON TAILBOOM AT CORRESPONDING LOCATIONS AND REMOVE. REAM HOLES TO Ø0.204 (#6). TRANSFER DRILL 4x Ø0.204 (#6) FROM TAILBOOM TO D3866-043 MOUNT. DEBURR. INSTALL D3866-043 MOUNT USING MS27039-1-11 SCREWS, NAS1149D0332J WASHERS AND MS21042L3 NUTS.
- 3) TRANSFER DRILL LOWER HOLES TO INSIDE DOOR SILL AND REAM INSIDE DOOR SILL TO Ø0.50 TO PROVIDE ACCESS FOR NUTS AND WASHERS. SEE VIEW D-D.

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DE APPR.		HARDPOINT KIT INSTALL	NTS
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**FIGURE 4**  
**LH TAILBOOM MOUNT INSTALLATION**

**NOTES:**

- 1) IF ATTACHMENT SCREWS ALREADY INSTALLED IN TAILBOOM, REMOVE SCREWS AND VERIFY CORRECT LENGTH PER DRAWING ABOVE. TRANSFER DRILL 4x  $\phi 0.204$  (#6) FROM TAILBOOM TO D3866-041/-043 MOUNT. DEBURR. ALIGN HOLES AND INSTALL D3866-043/-041 TAILBOOM MOUNT USING MS27039-1-11 SCREWS INTO EXISTING ANCHOR NUTS.
- 2) IF ATTACHMENT SCREWS NOT INSTALLED, DRILL OFF RIVETS ON TAILBOOM AT CORRESPONDING LOCATIONS AND REMOVE. REAM HOLES TO  $\phi 0.204$  (#6). TRANSFER DRILL 4x  $\phi 0.204$  (#6) PER MOUNT FROM TAILBOOM TO D3866-041/-043 MOUNT. DEBURR. INSTALL D3866-041/-043 MOUNTS USING MS27039-1-11 SCREWS, NAS1149D0332J WASHERS AND MS21042L3 NUTS.

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